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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,376	12/11/2003	Satoshi Inoue	393032034420	9778

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MORRISON & FOERSTER, LLP
555 WEST FIFTH STREET
SUITE 3500
LOS ANGELES, CA 90013-1024

EXAMINER

WARREN, DAVID S

ART UNIT PAPER NUMBER

2837

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

✕ EA

Office Action Summary	Application No. 10/734,376	Applicant(s) INOUE, SATOSHI	
	Examiner David S. Warren	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 26 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/22/05: 12/11/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1 – 25 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 - 24 of copending Application No. 10/289898. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. Claim 25 is claiming a "narrower" limitation ("diverging" is deemed to be a narrower term than "continuous") and therefore falls within the scope of double patenting (MPEP 804 II (A) – see second paragraph).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28 - 30 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "caulking" in claim 28 is used by the claim to mean "creating a flared portion of the tube", while the accepted meaning is "adding a sealant to make water and/or air tight." The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 3, 12, 20, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanemitsu et al. (6,531,651). Regarding independent claim 1, Kanemitsu discloses the use of a keyboard including plural keys (1), having an applied moment (col. 10, lines 39 – 41), a regulative key balancer (regulation is achieved by the weight and weight location), a non-lead weight (i.e., see Abstract; “materiels except for lead”) embedded in the bar of each key (see fig. 3) and an anchor (as defined by Applicant, anchors are the ridges shown in fig. 4, shrink wrap in fig. 5, and the hemispherical protrusions 25b shown in figs. 9A and 9B), and a tone generating system connected to the plural keys (inherent in any piano). Regarding claim 2, the key balancer (i.e., weight) is received in a hole in the key (see fig. 3). Regarding claim 3, ridges are shown in the anchor of Kanemitsu’s fig. 4 – these ridges secure the weight balancer within the key (col. 11, third paragraph) and “bite an inner surface ... of said bar... so as to make said weight piece stable in said hole.” Regarding claim 12, Kanemitsu shows the use of a through-hole (Kanemitsu states that hole 55 “extends through the key body” – col. 1, lines 30 – 34). Regarding claims 20 and 23, Kanemitsu shows that it is well-known to caulk weights within a piano key (col. 1, line 35).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 8, 22, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu in view of Helderan (3,921,496). The teachings of Kanemitsu have been discussed supra pertaining to independent claim 1 and dependent claim 2. Regarding claim 4, Kanemitsu does not teach the use of asymmetrical outer surface ridges to thereby make the ridges sharp. Helderan discloses a means to be secured in a hole using asymmetrical ridges (on both inner and outer elements shown in fig. 2). Regarding claim 5, the ridges of the Helderan shank appear to be shaped "corresponding to a stack of frustums of cone so that a peripheral area of a bottom surface and a side surface of each frustum serve as [an] outer surface of ... each of ... plural pairs" (as shown in Applicant's embodiment of fig. 3). Regarding claim 8, official notice is taken that inserts having "spiral ridge" are extremely well-known. This feature can be found on any wood screw (Applicant is directed to class 411, subclass 378 and its indents). Regarding claims 22 and 26, official notice is taken that using pins to secure objects with a pin is well-known (e.g., a cotter pin, see class 411, subclass 213). It would have been obvious to one of ordinary skill in the art to combine the teachings of Kanemitsu and Helderan to obtain a balancer weight for a keyboard using an asymmetrically ridged weight. The motivation for making this combination is that it is extremely well-known that "sharp" ridges provide a secure connection between an object inserted into another.

Claims 6, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu in view of Stumpf et al. (6,193,456). The teachings of Kanemitsu have been discussed supra pertaining to independent claim 1 and dependent claim 2. Regarding claim 6, Kanemitsu does not disclose the use of teeth to "bite an inner surface portion" of the hole. Stumpf discloses an insert having teeth (10) used to bite an inner surface. Regarding claims 7 and 9, Kanemitsu does not disclose the use of teeth having a pyramid shape nor a polygonal disc. While Stumpf does not disclose a pyramid or disc, the shape of the teeth shown in Stumpf's figs. 1 and 2, are deemed to be functionally equivalent to a pyramid and disc, i.e., they have a point that projects into the inner surface of a hole (or a "receiving bore") to make the insertion piece stable within the hole or receiving bore. It would have been obvious to one of ordinary skill in the art to combine the teachings of Kanemitsu and Stumpf to obtain an insert having pyramid-shaped teeth. The motivation for making this combination is found in Stumpf: By using teeth, "such measures provide for increased resistance to withdrawal and rotation of the insert," i.e., it provides added security (col. 1; lines 20 – 25).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu in view of Johnson et al. (5,395,194). The teachings of Kanemitsu have been discussed supra pertaining to independent claim 1 and dependent claim 2. Kanemitsu does not disclose the use of a resilient tubular member inserted into the hole. Johnson shows element 28 (similar to Applicant's weight) inserted in resilient

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member 10. The ridges of element 28 are deemed to be synonymous to "bulge." It would have been obvious to one of ordinary skill in the art to combine the teachings of Kanemitsu and Johnson to obtain an insert having a flexible sleeve. The motivation for making this combination is found in Kanemitsu (col. 14, fifth paragraph): The elasticity of the sleeve provides a "snap fit into the embedding hole...the weight can be readily and securely attached to the key body without caulking."

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu in view of Okoneski (5,716,289). The teachings of Kanemitsu have been discussed supra with respect to independent claim 1 and dependent claim 12. Kanemitsu does not disclose the use of a through-hole with increased cross section from a certain point. Okoneski disclose the use of inserting a weight (22) into a hole of decreasing (or increasing) diameter (figs. 3 and 4). It would have been obvious to one of ordinary skill in the art to combine the teachings of Kanemitsu and Okoneski to obtain a weight added to a device using a hole of varying (i.e., increasing or decreasing) diameter. The motivation for making this combination is that it provides a more secure fit for the weight. Both Kanemitsu and Okoneski are adding weights to provide a better balance and/or "feel" of the implement.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanemitsu in view of Unser (650,208). The teachings of Kanemitsu have been discussed supra pertaining to independent claim 1 and dependent claim 20. Kanemitsu

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does not disclose the use of an anchor having a slit wherein the parts are expanded within a hole. Unser discloses an insert (1) having slits (unnumbered but shown in figs. 1 and 4). When element 6 is inserted into element 1, element 1 is expanded (see lines 45 – 52). It would have been obvious to one of ordinary skill in the art to combine the teachings of Kanemitsu and Unser to obtain a weight having a slit for expanding. The motivation for making this combination is found in Unser: The use of a slit allows the insert to expand and thus do away with threads, this provides a much less expensive manufacturing cost (lines 13 – 19).

Allowable Subject Matter

Claims 13 – 18, 21, 26, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose the use of a weight in two pieces being inserted into a through hole having a narrow portion and a wide portion.

Claims 28 - 30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Kumano ('234), Lee ('003), Kumano ('241), Stanwood ('582), Stanwood ('024), and Niitsuma ('351) all show adding weights to piano-type keys for balancing and regulating purposes. The patents to Barnsdale ('181), MacDonald ('834), Helderman ('496), Miller ('923), Wernhardt ('119), Fucci ('702), and Meersteiner ('243) all show the various fastening techniques as claimed by the applicant.

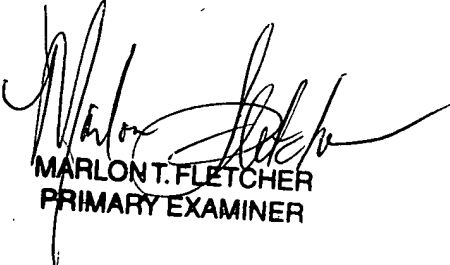
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dsw



MARLON T. FLETCHER
PRIMARY EXAMINER